

REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 1-7, 9-11, 13-23, 25-28 and 30-33 and 35-38 remain pending in the application. By this Amendment, claims 1, 11, 17, 28 and 38 are amended; and claims 8, 24 and 34 are canceled. No new matter is added.

In numbered paragraph 4, page 2 of the Office Action, while claims 1-8, 11-16, 17-24, 27-34 and 38-47 are listed as being rejected; it appears from paragraph 5, pages 2-28 of the Office Action, claims 1-8, 11, 13-24, 27, 28, 30-34, 37 and 38 are actually rejected as being unpatentable over Bellegarda, "Exploiting Latent Semantic Information in Statistical Language Modeling," Proceedings of the IEEE, Vol. 8, dated Oct. 26, 2000, in view of US Patent 7,158,986 (Oliver et al.). In numbered paragraphs 6 and 7, pages 28 and 29 of the Office Action, dependent claims 8, 24 and 34 are rejected as allegedly being unpatentable over the Bellegarda article, in view of U.S. Patent 7,158,986 (Oliver et al.) and further in view of U.S. Patent 5,899,995 (Millier et al.). In numbered paragraphs 8 and 9, pages 29-33 of the Office Action, dependent claims 9, 10, 25, 26, 35 and 36 are rejected as allegedly being unpatentable over the Bellegarda article, in view of the Oliver et al. patent, and further in view of U.S. Patent 7,085,767 (Kusama). These rejections are respectfully traversed.

Applicants have disclosed that suitable thresholds can be established to implement any desired level of granularity (specification at page 10, paragraph [0030]). Applicants have further disclosed that a first threshold can be defined to establish the lowest level of clusters into which the documents will be grouped, and

additional thresholds can define higher level clusters, or "super clusters", in which plural lower-level clusters are grouped (specification at page 11, paragraph [0030]).

On page 7 of the Office Action, the Examiner admits that "Bellegarda does not explicitly teach a method comprising: A) including the step of defining multiple threshold values and clustering said documents in accordance with said multiple threshold values to thereby establish plural levels of clusters." At least for these reasons, Applicants respectfully submit that the Bellegarda article would not have taught or suggested clustering the files within said space, wherein multiple threshold values are defined and said files are clustered based on said multiple threshold values; deriving a hierarchy of plural levels of clusters from said clustering; and displaying the files in a hierarchical format of plural levels of clusters based on said derived hierarchy, as recited in claim 1.

The Oliver et al. patent does not cure the deficiencies of the Bellegarda article. On page 7 of the Office Action, the Examiner relies on col. 8, lines 39-43 of the Oliver et al. patent to assert that "Oliver, however, teaches 'including the step of defining multiple threshold values and clustering said documents in accordance with said multiple threshold values to thereby establish plural levels of clusters'." But the Oliver et al. patent passage as relied upon by the Examiner merely recites a database application for creating and addressing a database, software filters for screening the content of documents served by a client's document server, and a text clustering application (col. 8, lines 39-43 of the Oliver et al. patent). It is not clear what exact reference the Examiner is relying on in reciting "In this example, Input Document 510 satisfies the profiles and constraints of Recent Stories Folder 530 and therefore is stored in Recent Stories Folder 530..." The Oliver et al. patent does not

support any such text. Even if the Examiner's recitation finds support, the recited passage on page 7 of the Office Action would not have taught or suggested clustering the files within said space, wherein multiple threshold values are defined and said files are clustered based on said multiple threshold values; deriving a hierarchy of plural levels of clusters from said clustering; and displaying the files in a hierarchical format of plural levels of clusters based on said derived hierarchy, as recited in claim 1.

As pointed out in Applicants' previous responses of record, the Millier patent discloses a technique for displaying files in a hierarchical format that is fundamentally different from that which is disclosed and claimed in the present application. Moreover, the Millier et al. patent does not cure the deficiencies of the Oliver et al. patent and the Bellegarda article. Bridging pages 28 and 29 of the Office Action, the Examiner relies on col. 8, lines 39-43 of the Millier et al. patent to assert that "Millier, however, teaches 'including the step of defining multiple threshold values and clustering said documents in accordance with said multiple threshold values to thereby establish plural levels of clusters'." Specifically, the Millier et al. patent as relied upon by the Examiner recites "In this example, Input Document 510 satisfies the profiles and constraints of Recent Stories Folder 530 and therefore it is stored in Recent Stories Folder 530. Similarly, Input Document 510 satisfies the profiles and constraints of Interesting Stuff-1 Folder 540 and is stored in Interesting Stuff-1 Folder 540" (col. 8, lines 39-43 of the Millier et al. patent). However, this recited passage as asserted by the Examiner does not speak of 1) multiple threshold values being defined in which files are clustered based on said multiple threshold values; 2) deriving a hierarchy of plural levels of clusters from said clustering; and 3)

displaying the files in a hierarchical format of plural levels of clusters based on said derived hierarchy, as recited in claim 1. The Millier et al. patent as relied upon by the Examiner would not have taught or suggested clustering the files within said space, wherein multiple threshold values are defined and said files are clustered based on said multiple threshold values; deriving a hierarchy of plural levels of clusters from said clustering; and displaying the files in a hierarchical format of plural levels of clusters based on said derived hierarchy, as recited in claim 1.

At least for these reasons of record, the Millier et al. patent, when considered individually or in the combinations as suggested by the Examiner, would not have taught or suggested clustering the files within said space, wherein multiple threshold values are defined and said files are clustered based on said multiple threshold values; deriving a hierarchy of plural levels of clusters from said clustering; and displaying the files in a hierarchical format of plural levels of clusters based on said derived hierarchy, as recited in claim 1.

The Kusama patent was applied by the Examiner for its disclosure relating to step S902 in which the "Title" of "cardinfo.xml" is read, and the folder having the same name as the meta data being saved in the "Title" is generated at a predetermined location in the binary data storage device (col. 5, lines 46-53). However, the Kusama patent would not have taught or suggested clustering the files within said space, wherein multiple threshold values are defined and said files are clustered based on said multiple threshold values; deriving a hierarchy of plural levels of clusters from said clustering; and displaying the files in a hierarchical format of plural levels of clusters based on said derived hierarchy, as recited in claim 1.

Claim 11 recites a graphical user interface configured to display files in a virtual file system with a semantic hierarchy of plural levels of clusters that is derived from semantic similarities of said files, clustering said files based on multiple threshold values, and determining a directory structure having plural levels of clusters based on the clustering determined from similarities between said files.

Claim 17 recites computer readable media having stored therein computer executable code for analyzing files in a file system to determine similarities in data pertaining to their content, clustering said files based on multiple threshold values, determining a directory structure having plural levels of clusters based on the clustering determined from similarities between the files, and displaying files in hierarchical format of plural levels of clusters based on the clustering determined from similarities between the files. Claim 28 recites a computer system, comprising: a file system storing files; a display device; a processor for analyzing the content of files stored in said file system to map said files into a semantic vector space, cluster the files within said space based on multiple threshold values, and derive a hierarchy of plural levels of clusters from said clustering; and a user interface which displays representations of files stored in said file system in the form of said derived hierarchy of plural levels of clusters. Claim 38 recites a method of organizing a plurality of documents, comprising: mapping all words of the plurality of documents and the plurality of documents in a semantic vector space; generating a plurality of clusters based on the semantic similarities of the plurality of documents and multiple threshold values; organizing the plurality of clusters into directories in a hierarchical format of plural levels of clusters; and displaying the plurality of documents in said hierarchical format of plural levels of clusters based on a result of clustering the

plurality of documents. At least for the reasons set forth above, and for similar reasons, the Bellegarda article, the Oliver et al. patent, the Millier et al. patent and the Kusama patent, when considered individually or in various combinations as suggested by the Examiner, would not have taught or suggested the respectively claimed features.

At least for the foregoing reasons, and for the reasons as set forth of record, Applicants' claims 1, 11, 17, 28 and 38 are allowable. The remaining claims depend from the respective independent claims, and recite additional advantageous features which further distinguish over the documents relied upon by the Examiner. As such, the present application is in condition for allowance.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice of Allowance is respectfully solicited.

Respectfully submitted,

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